Physical drivers of the cosmic star formation history

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DOI:
10.33612/diss.101445849

Propositions

accompanying the dissertation

Physical Drivers of the Cosmic Star Formation History

1. Extracting information from lower resolution and blended imaging data is improved when coupled with multi-wavelength observations of higher resolution (Chapter 2).

2. The slope of the galaxy main sequence, the link between high mass and low mass galaxies, evolves with redshift (Chapter 3).

3. The presence of a turnover in the galaxy main sequence is a selection effect, with a turnover appearing with more generous definitions of star forming galaxies (Chapter 3).

4. Simulated observations can be used to speed up the classification of objects in real observations by removing the reliance on humans (Chapter 4).

5. Galaxy mergers have little effect on the star formation rates of the colliding galaxies over the majority of the merger period but can cause large bursts on shorter timescales (Chapter 5).

6. Machine learning is the future of galaxy classification in the era of large surveys (Chapters 4 and 5).

7. The heated discussions surrounding the term 'main sequence of star forming galaxies' are a distraction from the science it encompasses.

8. The term 'Artificial Intelligence' is at best misleading and at worst a boundary for entry.

9. The creation of boundaries suppresses the exchange of ideas and slows progression. The removal of boundaries fosters better collaboration and understanding.

William J. Pearson